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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/531,679 03/20/00 KUDANA

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MORRISON LAW FIRM
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QM32/0913

EXAMINER

BUTLER, M

ART UNIT

PAPER NUMBER

3726

DATE MAILED:

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/531,679

Applicant(s)

KODAMA ET AL.

Examiner

Marc W Butler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

It is noted that priority is claimed for foreign application Japan 11-074392 filed 3/18/1999 as denoted in Applicant's Declaration. However, the aforementioned document is not enclosed within Applicant's file. Applicant is requested to forward the certified copy of the document or acknowledge proper receipt by the Patent Office of said document.

Allowable Subject Matter

1. The indicated allowability of claim 3 is withdrawn in view of the newly discovered reference(s) to Tsushima et al (5658082). Rejections based on the newly cited reference(s) follow. Any delay in the prosecution of this application is regretted.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Tsushima et al.

AAPA teaches extending life of cylindrical roller bearing or needle roller bearings, for example, in Unexamined Patent Publication (Kokai) No. 5-239550. Longer life is achieved by improving a retained austenite amount of a surface layer by about 30%, and subjecting the surface layer to a specific heat treatment for applying a residual compression stress. Thereafter,

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the part is subjected to specific surface machining so that the surface is formed with micro concavo-convex portions in random directions.

Thus, AAPA teaches the method essentially as claimed but lacks a specific teaching of "carbonitriding" as claimed.

However, Tsushima et al discloses that carburizing treatments of bearing components as insufficient for extending its service life. To address these concerns, Tsushima et al teaches improved wear resistance and heat resistance obtained by carbonitriding bearing structure. Hence, it would have been obvious to a person of ordinary skill at the time the invention was made to produce AAPA's bearing structure by carbonitriding, in light of the teachings of Tsushima et al. One of ordinary skill would have been motivated to extend the bearing component life by utilizing this improved process for forming components.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc W. Butler whose telephone number is (703) 308-1787.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone numbers is (703) 308-1148.

Facsimile correspondence for this application should be sent to (703) 872-9302.

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For additional assistance please feel free to contact The Customer Service Department at
(703) 306-5648.


mw

9/6/01


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SUPERVISORY PATENT EXAMINER
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